

REMARKS

This is in response to the Office Action mailed July 31, 2003. It is believed that the amendments to the claims render the rejections moot; therefore, further comment is generally withheld. However, it may be helpful to briefly contrast Pifer, U.S. Patent No. 4,914,444.

Pifer discloses correlating "lightning events." The term "lightning event" is not defined in Pifer, but examples of lightning events are given in Figure 2 where the lightning events are indicated as being "lightning discharges." The salient feature of the lightning event as indicated in Figure 2 and the related text in Pifer is that it is characterized by an impulse function, so that each lightning event is characterized by one pulse.

In a first embodiment of Pifer, lightning events are correlated by comparing the time intervals between the lightning events detected at each of two detectors (Col. 2, lines 16 - 21). If the time intervals are approximately equal, any difference in the measured time of occurrence of either of the events at two different detectors is assumed to be due to drift.

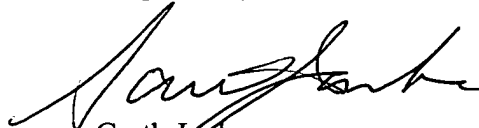
In a second embodiment of Pifer, two lightning events are "correlated" by assuming that they are the same provided their measured times of occurrence are within a predetermined maximum (Col. 2, lines 29 - 34). Any difference in the measured time of occurrence of the two events at two different detectors is assumed to be due to drift.

Since each lightning event is characterized by one pulse, Pifer correlates two pulses using two pulses in both embodiments. Particularly, in the first embodiment, Pifer compares the time intervals between the two pulses to determine if the times are approximately equal to correlate the two pulses, and in the second embodiment, Pifer determines whether the two pulses arrive at a central site within a predetermined window of time to correlate the two pulses.

Amended claim 24 and parallel new claim 132 clarify and explicate that a set of pulses is correlated using only a sub-set of the pulses in the set. Moreover, the claimed correlation is used to produce an estimate of the time and location of that portion of the lightning flash corresponding to the pulses. The claimed set of pulses is, therefore, representative of a sufficiently compact portion of the lightning flash that a single time and location estimate can be provided. Pifer does not come close to recognizing this feature of Applicants' invention.

It is therefore respectfully submitted that amended claim 24 and new claims 107 - 153 are in condition for allowance, and the examiner is therefore requested to allow these claims and pass this case to issue.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Garth Janke', written over the printed name.

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